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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/342,917	06/30/1999	HIROAKI SUGIURA	862.2900	7289

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EXAMINER
HAVAN, THU THAO

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 03/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.		Applicant(s)	
Office Action Summary	09/342,917		SUGIURA, HIROAKI	
	Examiner		**Art Unit**	
	Thu-Thao Havan		2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>30 June 1999</u> .

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-23</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-23</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>30 June 1999</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)		4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .	
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)		5) ☐ Notice of Informal Patent Application (PTO-152)	
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3 and 4</u> .		6) ☐ Other: .	

DETAILED ACTION

Drawings

1.   This application has been filed with drawings, which are approved by the

Draftsperson.

Specification

2.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims **1-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Komaki (US patent no. 5,883,821) in view of Kasson et al. (US patent no. 5,390,035).

Re claim **1**, Komaki teaches a data conversion method comprising the steps of

outputting a value which represents distance from an input value to a grid point of a

look-up table (col. 1, lines 51-67) using the look-up table; In other words, Komaki

teaches data transformation corresponds to data conversion as claimed. Data

conversion is converting one data into another and data transformation is converting

data too. Furthermore, Komaki transform output data for a point from a sample point

such as a grid point in a three dimensional look-up table (LUT).

executing data conversion of the input value by interpolating the value obtained by the look-up table (col. 2, lines 10-30; col. 9, lines 35-44). In other words, Komaki teaches the input signals R, G, B is interpolated and the values are stored in the look-up table (LUT).

Komaki *fails* to specifically disclose "normalized by a sufficiently large value," as claimed. However, Kasson teaches normalization for data transformation (col. 22, lines 41-65; col. 23, lines 14-23 and lines 43-68; col. 9, lines 38-58; fig. 16). Kasson teaches color conversion using a grid points by normalizing with the appropriate maximum values for each dimensional of the color space in relations to tetrahedron packing. Furthermore, a maximum value is any large value. In figure 16, Kasson graphically teaches the normalized error using a function.

Therefore, taking the combined teaching of Komaki and Kasson as a whole, it would have been obvious to combine normalized by a sufficiently large value as claimed to the modified system of Komaki. Doing so would enable accuracy and efficiency without sacrificing speed or error performance.

Re claims **2, 7, 14, and 19**, Kasson discloses an input value having not less than two dimensions using tetrahedral interpolation (col. 7, lines 13-21; col. 8, lines 34-63). In other words, Kasson teaches three-dimensional input domain space for tetrahedral interpolation thus three-dimensional is not less than two dimensions.

Re claims **3, 8, 15, and 20**, Kasson discloses a sufficiently large value is a power of 2 (col. 2, lines 55-65; fig. 4). In other words, Kasson teaches a power of 2 for the normalization operation.

Re claims **4, 9, 16, and 21**, Komaki discloses positions of the grid point are equal to each other in all input dimensions (fig. 2-3). In figures 2 and 3, Komaki discloses the grid points are equal to each other and he performs interpolation by dividing interpolation grid into equal size.

Re claims **5, 10, 17, and 22**, Komaki discloses input value is image data in one of RGB, CMY, and XYZ color spaces (col. 1, lines 17-36 and 51-67; col. 9, lines 1-34). In other words, Komaki teaches input luminance signals RGB.

Re claim **6**, the limitation of claim 6 is identical to claim 1 above except for an apparatus, storage means, and computation means. Therefore, claim 6 is treated with respect to grounds as set forth for claim 1 above except for an apparatus, storage means, and computation means. As for an apparatus, Komaki teaches a data transformation apparatus for transforming one data space into another data space (col. 3, lines 39-41). As for storage means, Komaki teaches storage means for data transformation (col. 4, lines 13-27). As for computation means, Komaki teaches calculating means which corresponds to computation means (col. 4, lines 35-40).

Re claim **11**, the limitation of claim 11 is identical to claim 1 above except for a computer program product comprising a computer readable medium having a computer program code. Therefore, claim 11 is treated with respect to grounds as set forth for claim 1 above except for a computer program product comprising a computer readable medium having a computer program code. As for a computer program product comprising a computer readable medium having a computer program code, Komaki

teaches a program readable by a computer (col. 4, lines 57-59). When a computer has

program then executes to allow the coding to program the system.

Re claim **12**, the limitation of claim 12 is identical to claim 1 above except for a

computer readable medium recorded data. Therefore, claim 12 is treated with respect

to grounds as set forth for claim 1 above except for a computer readable medium

recorded data. As for a computer readable medium recorded data, Komaki teaches a

storage medium storing a program readable by a computer (col. 4, lines 57-59). A

program readable by a computer corresponds to a computer readable medium recorded

data. A recorded data is a stored data.

Re claim **13**, the limitation of claim 13 is identical to claim 1 above except for

selecting a plurality of grid points on the basis of input data. Therefore, claim 13 is

treated with respect to grounds as set forth for claim 1 above except for selecting a

plurality of grid points on the basis of input data. As for selecting a plurality of grid

points on the basis of input data, Komaki teaches (col. 4, lines 57-59).

Re claim **18**, the limitation of claim 18 is identical to claims 1 and 13 above

except for an apparatus. Therefore, claim 18 is treated with respect to grounds as set

forth for claims 1 and 13 above except for an apparatus. As for an apparatus, Komaki

teaches a data transformation apparatus for transforming one data space into another

data space (col. 3, lines 39-41).

Re claim **23**, the limitation of claim 23 is identical to claims 1 and 13 above

except for a computer program product comprising a computer readable medium having

a computer program code. Therefore, claim 23 is treated with respect to grounds as set

forth for claims 1 and 13 above except for a computer program product comprising a

computer readable medium having a computer program code. As for a computer

program product comprising a computer readable medium having a computer program

code, Komaki teaches a program readable by a computer (col. 4, lines 57-59). When a

computer has program then executes to allow the coding to program the system.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

> Oliver et al., US patent no. 5,710,709
>
> Doi et al., US patent no. 5,537,520
>
> Lin, US patent no. 6,204,939)
>
> Nin, US patent no. 5,748,195
>
> Sugiura et al., US patent no. 5,045,732
>
> Sakamoto, US Patent No. 4,511,989
>
> Rolleston, US Patent No. 5,592,591
>
> Nakayama, US Patent No. 5,715,376

Inquiries

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Thu-Thao Havan whose telephone number is (703)

308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-

5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Thu-Thao Havan
Art Unit: 2672
February 24, 2002